Revised Claims

1. A method for producing a corrosion-resistant and oxidation-resistant coating for a component part, especially for a component part of a gas turbine, made of a metal-based alloy which contains more of a base metal than of all other alloy components, having the following steps:

a) making available a slip material which, besides a binding agent, contains at least one metal powder, the metal powder being made up of up to at least 25 wt.% of at least one metal of the platinum group, and

a1) is formed of jacketed powder cores, the powder cores being formed from at least one metal of the platinum group; and the jacketing of the powder cores being formed of a material having the same base metal as the metal base alloy, or

a2) being formed of a metal powder alloy which, besides the at least one metal of the platinum group, contains at least one material having the same base metal as the metal base alloy,

b) applying the slip material at least from area to area onto the component part while forming a slip layer,

c) curing and drying the slip layer,

d) heat treating the component part that is coated with the slip material at least from area to area, in

order to diffuse the slip layer into the component part.

2. The method as recited in Claim 1,
wherein the powder cores of the metal powder are formed from platinum (Pt) and/or palladium (Pd).

3. The method as recited in Claim 1 or 2,
wherein in the case of a metal-based alloy developed as a nickel-based alloy, the jacketing of the powder cores is formed from nickel (Ni) or a nickel alloy.

4. The method as recited in Claim 1 or 2,
wherein in the case of a metal-based alloy developed as a cobalt-based alloy, the jacketing of the powder cores is formed from cobalt (Co) or a cobalt alloy.

5. The method as recited in Claim 1 or 2,
wherein in the case of a metal-based alloy developed as an iron material, the jacketing of the powder cores is formed from iron (Fe) or an iron alloy.

6. The method as recited in one or more of Claims 1 through 5,
wherein the thickness of the jacketing of the metal powder developed as jacketed powder cores is selected in such a way that the proportion of the material of the powder cores in the metal powder is at 25 wt.% to 85 wt.%, and the proportion of the material of the jacketing is at 75 wt.% to 15 wt.%.

7. The method as recited in Claim 6,
wherein the metal powder is developed as nickel-jacketed platinum, the thickness of the nickel jacketing being selected in such a way that the platinum proportion is at 65 wt.% to 85 wt.% and the nickel proportion is at 35 wt.% to 15 wt.%.

8. The method as recited in Claim 1,
wherein the metal powder is formed from a metal powder alloy which, besides platinum, contains at least one material based on the same material as the metal-based alloy.

9. The method as recited in Claim 8,
wherein the metal powder is developed as a metal powder alloy having 65 wt.% to 85 wt.% platinum and 35 wt.% to 15 wt.% nickel.

10. The method as recited in one or more of Claims 1 through 9,
wherein the slip material, besides the binding agent and the metal powder, also contains aluminum (Al) and/or silicon (Si).

11. The method as recited in one or more of Claims 1 through 9,
wherein the slip material, besides the binding agent and the metal powder, also contains an MCrAlY metal powder.

12. The method as recited in one or more of Claims 1 through 11,
wherein the metal powder has a grain size distribution of 0.01 μm to 5 μm, preferably from 0.2 μm to 0.5 μm.

13. The method as recited in one or more of Claims 1 through 11,
wherein subsequently to step d), an aluminizing of the component part is carried out.

14. A component part, especially a turbine blade of a gas turbine, having a corrosion-resistant and oxidation-resistant coating, the coating being applied to the component part by a method according to one or more of

Claims 1 through 13.